

Supporting primary care public health functions

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Disease prevention is a key goal of primary care. Primary care providers are in an ideal position to undertake this because most people will visit their primary care practitioner in any 2-year period, creating opportunities to identify and manage the risk of serious disease by screening for conditions like diabetes, hypertension, and appropriate cancers and by identifying candidates for immunization.¹ With the increased use of electronic medical records (EMRs) and the ability to generate usable summary information about the clinical condition of patients at the individual and group level, we have tremendous potential to provide and monitor effective screening interventions and improve chronic disease prevention and management. This analytic capability could advance prevention and care of chronic disease and enable primary care practitioners to function as leading agents for public health and population health activity, which is immediately embedded in communities of need.


The Canadian Primary Care Sentinel Surveillance Network (CPCSSN) Data Presentation Tool (DPT) is a customized Web-based software application designed to present CPCSSN-processed data in an easy-to-use format for primary care clinics. The DPT also facilitates public health action in participating clinics by allowing easy and direct access to their CPCSSN-processed EMR data. With funding from the Public Health Agency of Canada, we are conducting a trial implementation of the DPT in a sample of clinics across the country. The DPT enables users to quickly understand disease prevalence and associated risk factors within their practice populations. For example, practitioners are able to determine their rates of immunization for influenza or screening for breast, cervical, and colorectal cancer. In the case of diabetes, practitioners can determine the prevalence of high and untreated hemoglobin A_{1c} levels among their patients. This allows for targeted group and individual interventions, potentially reducing diabetes-related complications.

Our main goal is to install, support, and continually improve the DPT in up to 60 CPCSSN sentinel clinics in Alberta, Ontario, and Quebec. We will also install versions of the DPT that aggregate anonymous patient data at appropriate community levels for use by primary care networks (in Alberta) and family health teams (in Ontario), as well as by regional departments of public health. We will evaluate the effectiveness of the DPT by assessing prevention-related patient- and practice-level improvement using a composite index based on the work of Nietert et al and Manca et al,^{2,3} and we will

evaluate the perceived ease of use and usefulness of the DPT in practice on the part of those using it.

In the short term we hope to observe increases in prevention maneuvers and improved data recording by physicians and other members of primary care teams associated with access to the cleaned and processed EMR data that CPCSSN and the DPT provide. We anticipate these changes will be indicative of an increased understanding of the health and sociodemographic characteristics of individuals and subgroups within practice populations and that they will generate opportunities for clinical action. We expect these actions will be associated with evidence of improved approaches to preventive care at the practice level, thus facilitating the transfer of public and population health priorities into individual patient care.

In the long term we expect to observe changes in the health of individual patients, as well as in the practice population, attendant on the changes in practice observed. We hope that such changes will encourage an increased focus by primary care practitioners on preventive measures before the onset of disease in those at risk and on earlier management of risk factors after disease onset.

Such a shift in attitude and activity among primary care practitioners has the potential to improve the health status of Canadians, especially those at increased risk of chronic disease. In effect, these data will facilitate the development of the population and public health role of primary care practitioners. It will also facilitate the translation of those actions at the group level into specific clinical decision making for individual patients. 

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Competing interests

None declared

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Sentinel Eye is coordinated by CPCSSN, in partnership with the CFPC, to highlight surveillance and research initiatives related to chronic illness prevalence and management in Canada. Please send questions or comments to Dr Richard Birtwhistle, Chair, CPCSSN, at richard.birtwhistle@dfm.queensu.ca.

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